



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,839	01/21/2004	Srikrishna Talluri		5856

7590 06/29/2006
SRIKRISHNA TALLURI
27136 GATEWAY DRIVE SOUTH, APT # 304
FARMINGTON HILLS, MI 48334

EXAMINER

WALTER, CRAIG E

ART UNIT PAPER NUMBER

2188

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,839	Applicant(s) TALLURI, SRIKRISHNA	
	Examiner Craig E. Walter	Art Unit 2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/21/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed on 21 January 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; *each non-patent literature publication or that portion which caused it to be listed* (emphasis added); and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. More specifically, the three non-patent literature publications listed on the IDS are not present in Applicant's file.

Drawings

2. The drawings are objected to because of the following reason:

Figures 1, 2A, 2B, 2C, and 3 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 1-3 are objected to because of the following informalities:

As for claim 1, the phrase "the said storage architecture" as recited in lines 2-3 of the original claim should be changed to "said storage architecture" for clarity. Additionally the phrase "the network system" as recited in line 4 of the original claim should be changed to "a storage architecture" to properly establish antecedent basis. Likewise the phrase "said method" as recited on lines 5-6 of the original claim should be changed to "said utilization is" for clarity. Lastly, the phrase "on said nodes" as recited in line 7 of claim 1 should be changed to "of said all or selected nodes" to properly establish antecedent basis.

As for claim 2, the phrase "the centralized server" as recited in lines 2-3 of the original claim should be changed to "the centralized file server" for clarity.

As for claim 3, the phrase "the said storage architecture" as recited in lines 2-3 should be changed to "said storage architecture" for clarity.

As for claims 1-3, Examiner respectfully requests Applicant modify each of the three claims to recite a preamble, followed by limitations to further limit the

Art Unit: 2188

claimed invention within the constructs of the preamble. An example for each of the three claims is proposed below.

Claim 1: A method for effective utilization of data storage capacity using a storage architecture wherein:

the said storage architecture enables dynamic configuration and segmentation of storage capacity on all or selected nodes on the network system into non-sharable and shared storage capacity segments, and;

said method further based on a percentage of `total installed capacity` or `available/unused storage capacity` on said nodes.

Claim 2: A method that uses a centralized file server directly in the path of a distributed network file system, wherein:

the centralized server acts as a host of original data and also as a back-up device.

Claim 3. A method for effective utilization of data storage capacity using a storage architecture wherein:

the said storage architecture makes optimal utilization of network bandwidth and subsystem I/O bandwidth for storing data in a distributed network file system.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Funk et al., US Patent 5,784,697 (hereinafter Funk).

As for claim 1, Funk teaches method for effective utilization of data storage capacity using a storage architecture wherein:

the said storage architecture enables dynamic configuration and segmentation of storage capacity on all or selected nodes on the network system into non-sharable and shared storage capacity segments (Fig. 1, elements 101, 102, 104, and 106 represent nodes each containing respective local memories (elements 108, 110, 112, and 114) – col. 3, lines 21-33. The system functions to allow for the dynamic allocation of memory from either all or selected memory associated with the nodes – col. 4, lines 10-30. The system performs allocation by reserving and assigning pools of memory space to one or more of the nodes (referring to the flow diagram in Fig. 4, elements 210, 220, and 240 - col. 6, lines 39-62). Also note since the memory locations not currently allocated to the pool are not reserved for any particular node, and the allocated pool space is reserved for a particular node or nodes, portions of the memory are now either shared, and non-sharable respectively) and;

said method further based on a percentage of `total installed capacity` or `available/unused storage capacity` on said nodes (col. 3, line 57 through col. 4, line 9 – the logical main storage (Fig. 2, lines 136) contains the total capacity of the system and the pool reservation is based on a percentage of the total capacity). The system can additionally function to assign the pools based on anticipated utilization and available space to a particular process within the node, which requires the allocated memory (col. 6, lines 41-63).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Ooho et al., US PG Publication 2003/0028592 A1 (hereinafter Ooho).

As for claim 2, Ooho teaches a method that uses a centralized file server directly in the path of a distributed network file system, wherein:

the centralized server acts as a host of original data and also as a back-up device (referring to Fig. 7, the distribution center (710) comprises a server (710) which comprises both a storage DB, containing original data (712), and a back database (714), which serves as a backup device). A description of the functionality and relationship of the distribution center to the terminals (i.e. network file system (elements

Art Unit: 2188

140 and 141)) is explained in paragraphs 0040 through paragraphs 0041 (all lines), which describe the relationship of a similar embodiment to Fig. 7. Fig. 1 shows an embodiment with two distribution centers whereas Fig. 7 depicts one, centralized file server in the path (via the network connection element 150) of the file system.

7. Claim 3 is rejected under 35 U.S.C. 102(e) as being anticipated by Peters et al., US Patent 6,415,373 B1 (hereinafter Peters).

As for claim 3, Peters teaches a method for effective utilization of data storage capacity using a storage architecture wherein:

the said storage architecture makes optimal utilization of network bandwidth and subsystem I/O bandwidth for storing data in a distributed network file system (referring to Fig. 1, the computer network (46) connects a plurality of storage units (w, x, y, z) to an asset manager (49) and a plurality of applications (44) – col. 6, lines 13-43. The system is capable of optimizing the overall computer network bandwidth by adjusting the transfer scheduling among the clients and storage units, hence optimizing the overall bandwidth by optimizing each subsystem I/O bandwidth schedule (i.e. storage unit) to ensure the most efficient access (i.e. reading from, or writing to) for each storage device).

Remarks

8. Since Applicant has elected to prosecute the instant application without the aid of a registered patent practitioner, Applicant is invited to contact the Examiner listed below upon reviewing this correspondence in order to discuss the merits of the case.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ulrich et al. (US PG Publication 2002/0178162 A1) teach an integrated distributed file system with variable parity groups.

Leung et al. (US PG Publication 2004/0039891 A1) teach optimizing storage capacity utilization based upon data storage costs.

Gibble et al. (US PG Publication 2004/0044854 A1) teach a method, system, and program for moving data among storage units.

Bakke et al. (US PG Patent 6,330,621 B1) teach an intelligent data storage manager.

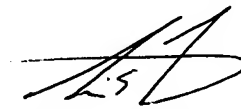
Skiba et al. (US PG Patent 6,336,988 B1) teach systems and methods for electronic data storage management.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig E. Walter whose telephone number is (571) 272-8154. The examiner can normally be reached on 8:30a - 5:00p M-F.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

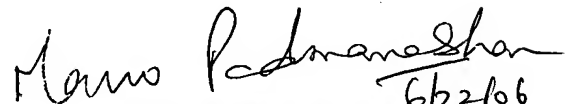
Art Unit: 2188

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Craig E Walter
Examiner
Art Unit 2188

CEW


6/22/06
MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER